WHAT IS CLAIMED IS:

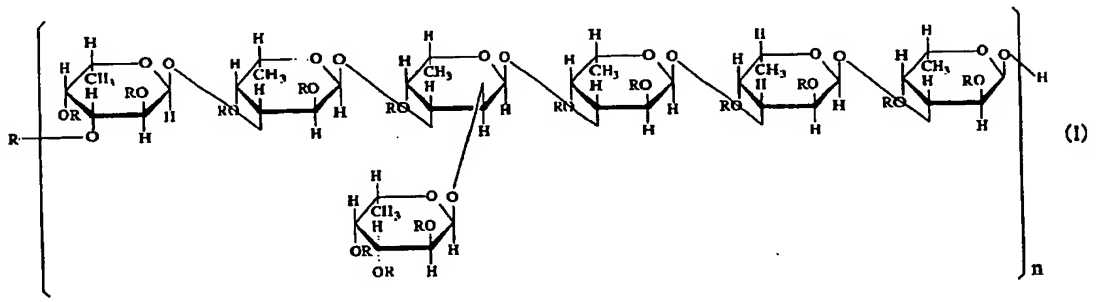
1. A sulfated fucan oligosaccharide obtainable by the method comprising:

allowing a sulfated fucan-digesting enzyme derived from *Alteromonas sp.* SN-1009 to act on the substance selected from the group consisting of:

a sulfated fucan having the following chemical and physical properties:

(1) containing fucose as a constituting saccharide;

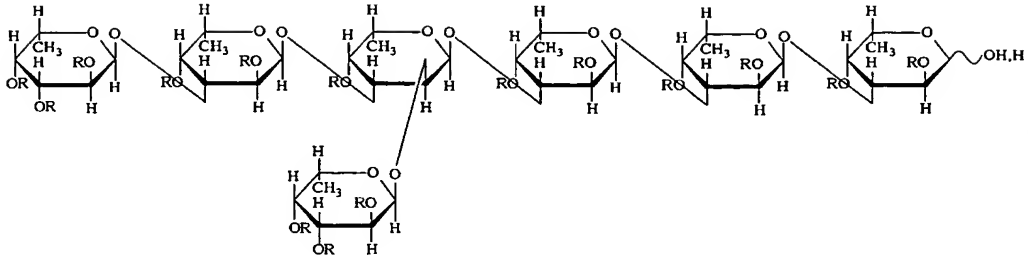
(2) containing a sulfated saccharide of general formula (I) as an essential component of the constituting saccharide:



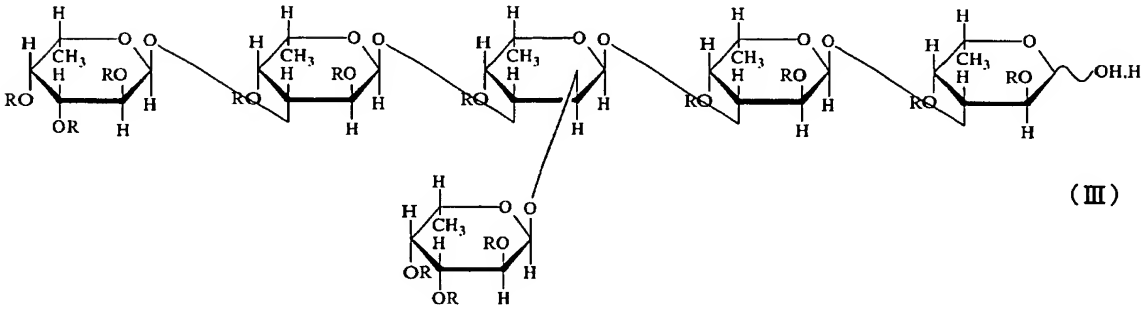
(I)

wherein R is H or SO_3H, at least one of R's is SO_3H and n is an integer of 1 or more; and

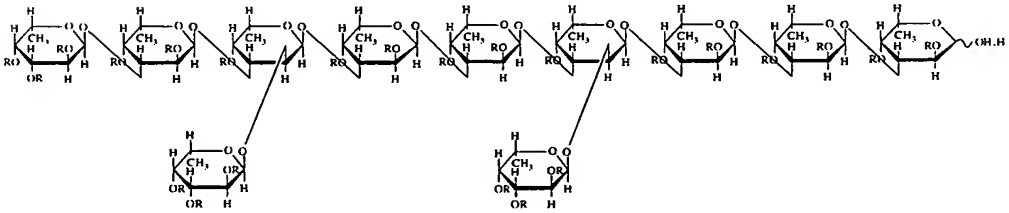
(3) being converted into smaller molecules by a sulfated fucan-digesting enzyme derived from *Alteromonas* sp. SN-1009 to generate at least one compound of general formulas (II), (III), (XIII), (XIV), (XV) and (XVI):



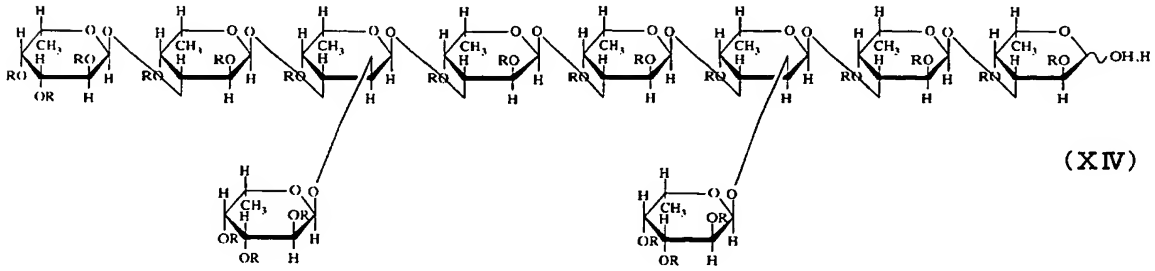
(II)



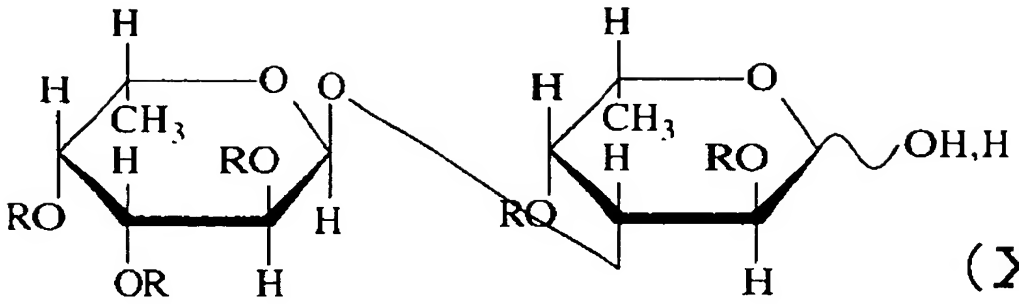
(III)



(XIII)

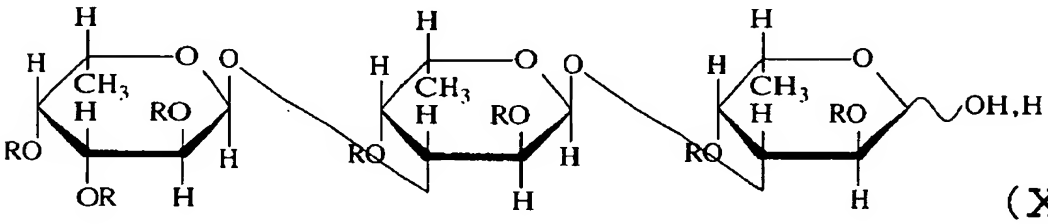


(XIV)



(XV)

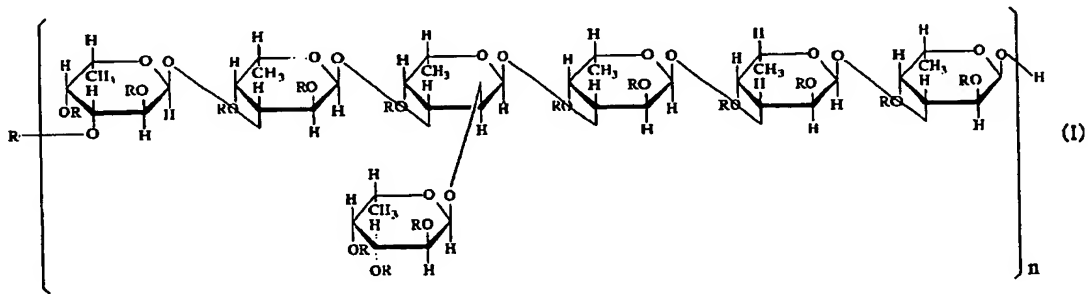
and



(XVI)

wherein R is H or SO_3H, at least one of R's is SO_3H in all formulas above, and

a sulfated fucan oligosaccharide of general formula (I):



(I)

wherein R is H or SO_3H, at least one of R's is SO_3H and n is 1 to 5; and

collecting a digestion product.

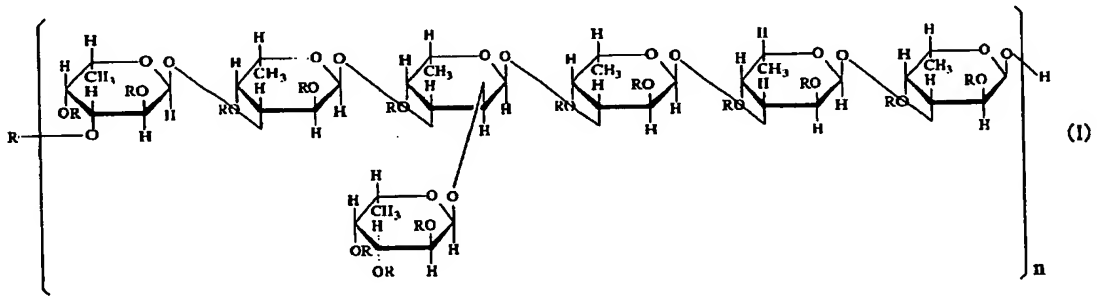
2. A degradation product of sulfated fucan obtainable by the method comprising:

allowing a sulfate fucan-digesting enzyme derived from *Alteromonas sp.* SN-1009 to act on the substance selected from the group consisting of:

a sulfated fucan having the following chemical and physical properties:

(1) containing fucose as a constituting saccharide;

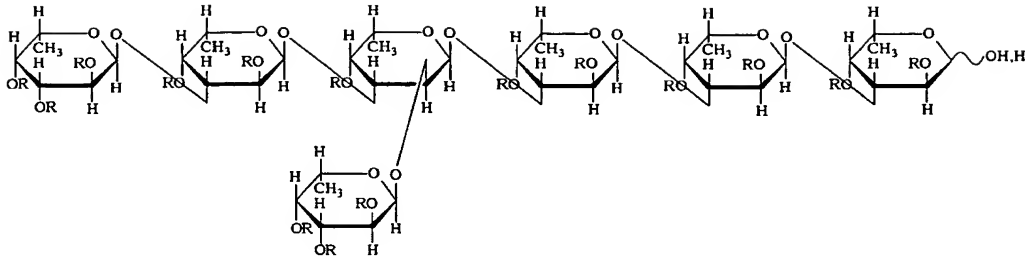
(2) containing a sulfated saccharide of general formula (I) as an essential component of the constituting saccharide:



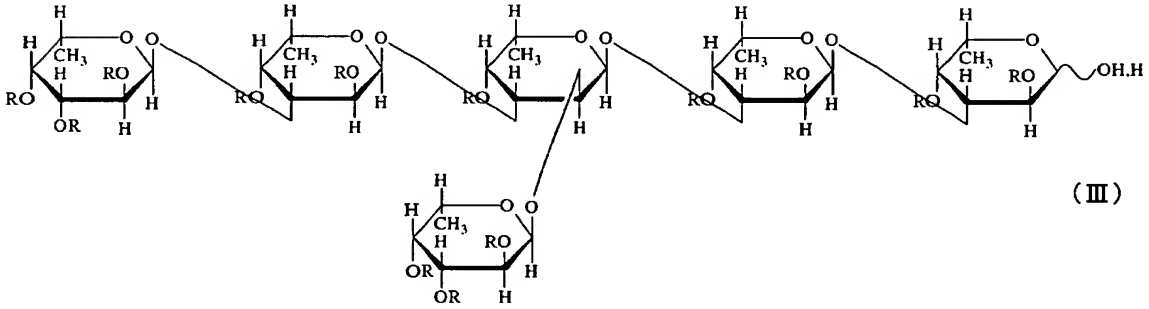
(I)

wherein R is H or SO_3H, at least one of R's is SO_3H and n is an integer of 1 or more; and

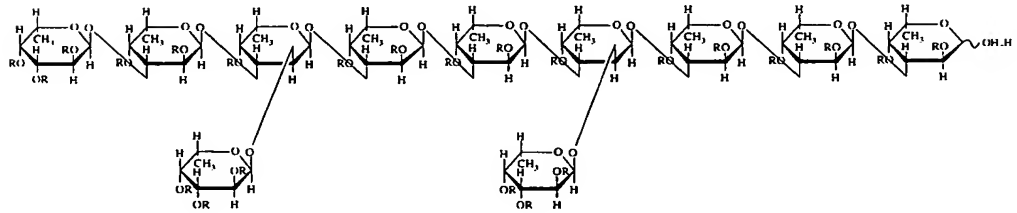
(3) being converted into smaller molecules by a sulfated fucan-digesting enzyme derived from *Alteromonas sp.* SN-1009 to generate at least one compound of general formulas (II), (III), (XIII), (XIX), (XV) and (XVI):



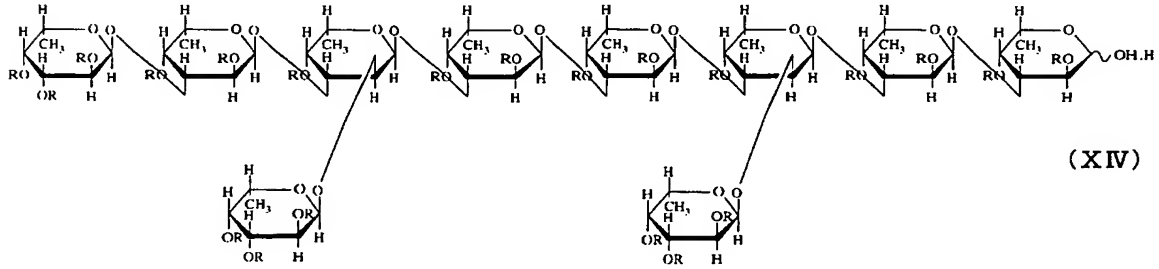
(II)



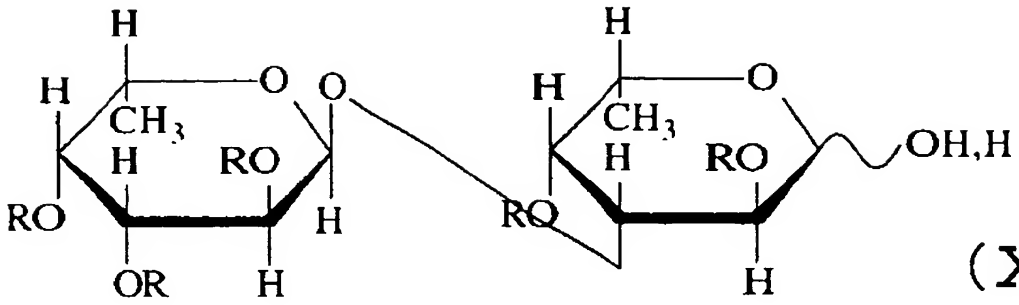
(III)



(XIII)

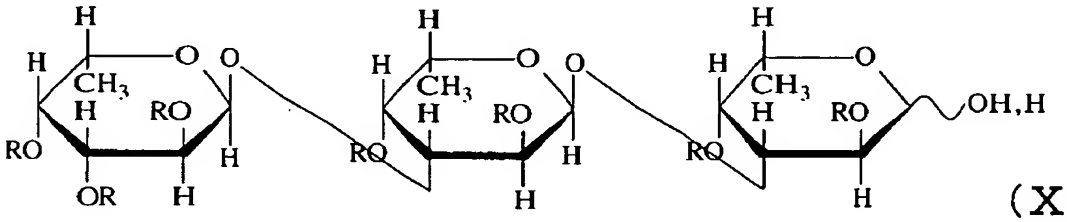


(XIV)



(XV)

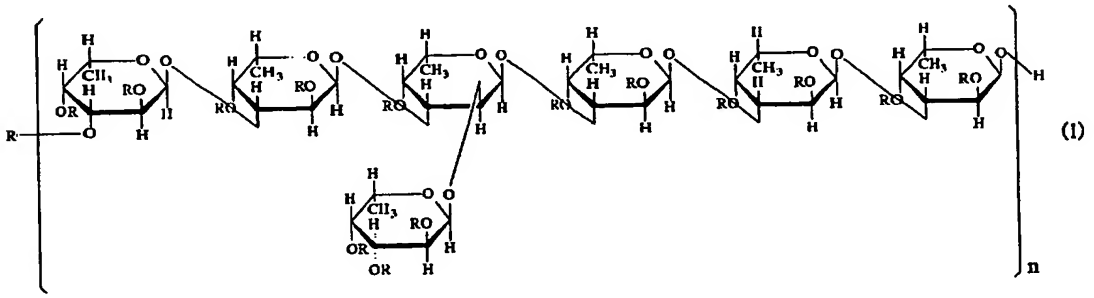
and



(XVI)

wherein R is H or SO_3H, at least one of R's is SO_3H in all formulas above; and

a sulfated fucan oligosaccharide of general formula (I):



(I)

wherein R is H or SO_3H, at lease one of R's is SO_3H and n is 1 to 5.